

Claims

1. Filter device comprising at least one filter element (13) which can be held in a filter housing (11) which can be connected to carry fluid by way of fluid connections (5, 7) to a fluid means, especially in the form of a hydraulic tank (1), by means of a connection system (9) and which can be detachably fastened to the fluid means by a fastening means (17, 19), characterized in that the fastening means is a bayonet catch (17, 19) which can be locked and released by turning the filter housing (11), that the connection system (9) is provided with at least one movable blocking element (33) which in the blocking position blocks the respective assignable fluid connection (5, 7) and releases it after moving into the open position, and that the blocking element (33) can be moved into the blocking position or open position by rotary motions of the filter housing (11) which are carried out to release and lock the bayonet catch (17, 19).
2. The filter device as claimed in claim 1, wherein the blocking element is a rotary disk valve (33) which is pivoted on the fluid means.
3. The filter device as claimed in claim 2, wherein the rotary disk valve (33) has at least one connecting sleeve (37, 39) which extends as part of the connection system into the interior of the filter housing (11), and has rotary motion which is transferred as a driver to the rotary disk valve (33).
4. The filter device as claimed in claim 3, wherein the filter housing (11) has an inlet opening (41) for supply of fluid to the dirty side and an outlet opening (43) for the outflow of filtered fluid from the filter housing (11) and wherein the rotary disk valve (33) for each opening of the filter housing has one connecting sleeve (37, 39) which penetrates the assignable opening.

5. The filter device as claimed in claim 4, wherein the filter housing (11) at the inlet opening (41) and the outlet opening (43) has one valve each (51, 53) which blocks the fluid outlet from the filter housing (11) in the closed position and which is pretensioned into the closing position by means of a closing spring (55, 57), and that each connecting sleeve (37, 39) of the rotary disk valve (33) on the end side has at least one control lug (47) which projects axially into the interior of the filter housing (11) and which comes into direct contact with the blocking body (49) of the assigned valve (51, 53) when the filter housing (11) is attached to the fluid means and forces it out of the closed position into the open position against the closing force.
6. The filter device as claimed in claim 5, wherein the filter housing (11) for the most part has the shape of a round cylinder which on the end which can be connected to the fluid means is closed by a bottom part (45) having an inlet opening (41) and an outlet opening (43) and on the opposite end is sealed by a cover part (23), and wherein on the peripheral edge of the housing (11) which surrounds the bottom part (45) there are radially projecting bayonet ribs (19) diametrically opposite one another as a component of the bayonet catch which as a further component has a bayonet ring (17) which is attached to a connecting plate (9) of the fluid means and surrounds the rotary disk valve (33) which is pivoted on the connecting plate (9) and by means of which the fluid connections (5 and 7) formed in the connecting plate (9) can be locked and released.
7. The filter device as claimed in claim 6, wherein the connecting plate (9) is formed by the bottom of a tank compartment (3) which is installed in a hydraulic tank (1) and in which the filter housing (11) can be held between the bottom and the tank cover (15) which enables access to the tank compartment (3).

8. The filter device as claimed in claim 7, wherein the cover part (23) of the filter housing (11) has an axially projecting handle (25) for executing the rotary motions which actuate the bayonet catch (17, 19) and wherein the tank cover (15) which can be moved between the tank open position and the tank closed position has a recess (27) which enables the handle (25) to be grasped in the tank closed position only for the rotary position of the filter housing (11) which corresponds to the locking position of the bayonet catch (17, 19).